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workflow ADJ management ADJ system	58

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DATE: Monday, March 17, 2003   Printable Copy   Create Case

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L3	workflow ADJ management ADJ system	58	L3
L2	5671415.pn. or 5321610.pn.	2	L2
L1	5729746.pn.	1	L1

END OF SEARCH HISTORY

WEST Search History

DATE: Monday, March 17, 2003

Set Name side by side	**Query**	**Hit Count**	**Set Name** result set
	DB=USPT; PLUR=NO; OP=OR		
L3	workflow ADJ management ADJ system	58	L3
L2	5671415.pn. or 5321610.pn.	2	L2
L1	5729746.pn.	1	L1

END OF SEARCH HISTORY

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Search Results - Record(s) 1 through 50 of 58 returned.

☑ 1.   Document ID: US 6526388 B1

L3: Entry 1 of 58   File: USPT   Feb 25, 2003

US-PAT-NO: 6526388
DOCUMENT-IDENTIFIER: US 6526388 B1

TITLE: Interoperable workflow management system

DATE-ISSUED: February 25, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sakaguchi; Toshiaki	Takatsuki			JP
Akifuji; Shunsuke	Wako			JP
Tsuji; Hiroshi	Itami			JP
Kimura; Michiaki	Yokohama			JP

US-CL-CURRENT: 705/8; 705/9, 709/225, 715/500

ABSTRACT:

An interoperable workflow management system controls an information disclosing range
of a workflow case to prevent transmission delay even when the communication path
has a small transmission capacity such that cancellation of the case is guaranteed
and the status of processing of the case in its destination can be immediately
known. To implement the system, workflow irrelevant data or pointer information
indicating the data is selectively transmitted to the destination in accordance with
the workflow management system thereof. At cancellation of the case, the irrelevant
data is replaced with canceling data. When a request including pointer information
for the workflow irrelevant data is received from the destination system, it is
assumed that the workflow case is in process.

5 Claims, 6 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 6

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image |

☐ 2.   Document ID: US 6507844 B1

L3: Entry 2 of 58   File: USPT   Jan 14, 2003

US-PAT-NO: 6507844
DOCUMENT-IDENTIFIER: US 6507844 B1

TITLE: Method and system for minimizing network traffic

DATE-ISSUED: January 14, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Leymann; Frank	Aidlingen			DE
Roller; Dieter	Schoenaich			DE

US-CL-CURRENT: 707/8; 707/10, 707/2, 709/104, 709/226, 709/235

ABSTRACT:

A method for minimizing network traffic of distributed applications operating in a distributed environment in a networked computer system, comprising a plurality of workstations and a plurality of database management systems (DBMS) managing data in a set of distributed tables for use by the workstation. The method derives from process models a placement of tables resulting in minimal network traffic when the process model is executed and thereby lowering costs and average response times. The invention can be advantageously applied to workflow management systems.

2 Claims, 6 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 6

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image |

☑   3.   Document ID: US 6505219 B1

L3: Entry 3 of 58   File: USPT   Jan 7, 2003

US-PAT-NO: 6505219
DOCUMENT-IDENTIFIER: US 6505219 B1

TITLE: Process management system wherein process descriptions provide indices to document histories

DATE-ISSUED: January 7, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
MacLean; Allan	Bottisham			GB
Dourish; Paul	San Francisco	CA		
Bentley; Richard	Cambridge			GB
Jones; Rachel	Haslingfield			GB

US-CL-CURRENT: 715/530; 715/500, 715/501.1

ABSTRACT:

Process descriptions are formulated in a process management system to describe the flow of work and organizational responsibility in the performance of organizational processes. The process descriptions, which are formulated, are defined by a plurality of tasks that are interrelated by process dependencies. The tasks are executed and completed in an order specified by the process dependencies. A task is completed when the person responsible for completing the task prepares a task document. To record context to aid others in interpreting the completed task documents resources used to complete the task are recorded either manually or automatically. The recorded resources are identified with links in the metadata of the task document. Using the metadata of the task document, the process description provides an index into the history of the task document. Using process descriptions, the process management system is able to organize task documents created for each completed task in a manner that is convenient for retrieval by others who have yet executed a task in the process description.

20 Claims, 12 Drawing figures

Exemplary Claim Number: 1
Number of Drawing Sheets: 12

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image |

☑ 4.   Document ID: US 6505176 B2

L3: Entry 4 of 58   File: USPT   Jan 7, 2003

US-PAT-NO: 6505176
DOCUMENT-IDENTIFIER: US 6505176 B2

TITLE: Workflow management system for an automated credit application system

DATE-ISSUED: January 7, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
DeFrancesco, Jr.; James R.	Columbia	MD		
Fingerhuth; Amy	Ellicott City	MD		
Freiman; Scott	Potomac	MD		
Rusk; Geoffrey	Laurel	MD		
Terpening; Steven	Bethesda	MD		

US-CL-CURRENT: 705/38

ABSTRACT:

A workflow management system for an automated credit application processing system.
The workflow management system automatically coordinates the workflow among various
workgroups and entities involved in the credit application process. The steps and
rule tests that define an organization's workflow are customized according to the
workflow requirements and process steps for each organization. The workflow manager
allows application steps to be processed simultaneously by various entities involved
in the loan application process. Workgroups are defined for each pre-configured
workflow definition. Each workgroup is associated with a particular set of
functions. A workgroup queue is provided for each workgroup. Workgroup queues
contain active or pending steps associated with the workgroup. In operation, users
can obtain status information by viewing data from the various workgroup queues. A
relational database management system is used to link a plurality of tests with each
workflow process step that is defined for particular workflow. The tests are linked
to rule elements which are linked to database elements that are linked to functions
that alter the database elements. Accordingly, when a function is executed, the
workflow management system automatically determines which particular workflow
process steps are potentially affected by the executed function. Then, the workflow
management system evaluates those steps to determine their status and to further
determine the process steps to be activated next.

25 Claims, 10 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 10

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☑ 5.   Document ID: US 6502087 B1

L3: Entry 5 of 58   File: USPT   Dec 31, 2002

US-PAT-NO: 6502087
DOCUMENT-IDENTIFIER: US 6502087 B1

TITLE: Work flow management system

DATE-ISSUED: December 31, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tsuiki; Kazuyasu	Osaka			JP
Majima; Hiroshi	Yokohama			JP
Ono; Hisashi	Yokohama			JP
Suga; Kazuhiro	Ibaraki			JP
Toge; Tetsuji	Kobe			JP
Akifuji; Shunsuke	Wako			JP

US-CL-CURRENT: 707/1; 707/10, 707/100, 707/2, 707/201, 707/3

ABSTRACT:

A work flow management system has circulation control functions for carrying out branching, queuing, dividing, broadcasting, recovering, holding and substitute of a circulation material in the work flow system that carries out at automatic sequential circulation of electronic information. Thus, a work requiring a complex circulation control can be done by an electronic system. The work flow management system includes a circulation material sending and receiving unit which has functions of entering, sending, receiving, referencing and updating a circulation material for the users who are the subscribers of the work flow system, the circulation material defining unit which defines a circulation destination and the circulation control for the users who manage the work flow, and the circulation material control unit which circulates a circulation material in accordance with circulation definitions defined by the circulation material defining unit.

16 Claims, 19 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 16

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☐   6.   Document ID: US 6493731 B1

L3: Entry 6 of 58   File: USPT   Dec 10, 2002

US-PAT-NO: 6493731
DOCUMENT-IDENTIFIER: US 6493731 B1

TITLE: Document management system for recording and viewing the history of document use

DATE-ISSUED: December 10, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Jones; Rachel	Haslingfield			GB
Dourish; Paul	San Francisco	CA		
MacLean; Allan	Bottisham			GB
Bentley; Richard	Cambridge			GB

US-CL-CURRENT: 715/501.1; 715/500, 715/530

ABSTRACT:

A document management system is adapted to operate with a process management system for recording and viewing metadata of a document. The document metadata is used to record resources referenced while the content of the document is developed. The resources are recorded in the document metadata to identify relationships between the resources and the content of the document. The document content includes links that reference the document metadata stored on a remote server. The resources recorded in the document metadata and the content of the document are simultaneously displayed on a user interface of the document management system to provide context for understanding document history. By storing document metadata and document content separately, the metadata of the document remains consistent even when multiple copies of the document are distributed over a network.

20 Claims, 12 Drawing figures
Exemplary Claim Number: 13
Number of Drawing Sheets: 12

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☐   7.   Document ID: US 6442572 B2

L3: Entry 7 of 58   File: USPT   Aug 27, 2002

US-PAT-NO: 6442572
DOCUMENT-IDENTIFIER: US 6442572 B2

TITLE: Method of and computer system for performing a transaction on a database

DATE-ISSUED: August 27, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Leymann; Frank	Aidlingen			DE
Roller; Dieter	Schoenaich			DE

US-CL-CURRENT: 707/203; 709/1, 709/100

ABSTRACT:

A method of performing a transaction on a database. A number of transactions are available to be performed on said database. At least one of said transactions may only be performed if corresponding requirements are fulfilled, wherein the fulfillment of said requirements depends on the prior successful termination of at least one other transaction. Then, said at least one of said transactions is invoked. Depending on stored information relating to prior successful terminations of transactions it is then checked whether said corresponding requirements are fulfilled. If said requirements are fulfilled, said transaction is performed. Then, after a successful termination of said transaction, an information relating to said successful termination is stored.

15 Claims, 2 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 1

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☑   8.   Document ID: US 6442563 B1

L3: Entry 8 of 58   File: USPT   Aug 27, 2002

US-PAT-NO: 6442563
DOCUMENT-IDENTIFIER: US 6442563 B1

TITLE: Workflow management system, method, and medium that morphs work items

DATE-ISSUED: August 27, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bacon; Ian D.	Manassas	VA		
Lindenfelser; Matthew M.	Vienna	VA		
Sheffield, Jr.; Edwin C.	Leesburg	VA		

US-CL-CURRENT: 707/103R; 705/8, 707/10, 709/201, 709/203

ABSTRACT:

A workflow system for distributing work items to actors so that the actors may perform an activity within a defined workflow process. A server interprets the workflow process and facilitates the scheduling and routing of work items in the system to an actor. Each work item has a set of work item contents data. Morphing logic determines which data is needed by an actor to which a work item has been scheduled and morphs a work item so that the actor receives only the data from the work item contents that the actor needs. Particular implementations are described for client actors and agent actors. A particular embodiment uses Java and distributed object along with application specific and system default HTML pages to display work item contents data to a participant.

15 Claims, 8 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 9

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☑ 9.   Document ID: US 6430538 B1

L3: Entry 9 of 58   File: USPT   Aug 6, 2002

US-PAT-NO: 6430538
DOCUMENT-IDENTIFIER: US 6430538 B1

TITLE: Workflow management system, method and medium with personal subflows

DATE-ISSUED: August 6, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bacon; Ian D.	Manassas	VA		
Bean; Carl T.	New Market	MD		
Handy, III; James M.	Haymarket	VA		

US-CL-CURRENT: 705/9; 707/104.1

ABSTRACT:

Workflow management system and method with personal subflows. A workflow system includes a workflow definition including an activity to be performed by a personal subflow. The personal subflow is defined by personal subflow activities and branch

expressions associated with the subflow activities. A server interprets the workflow definition and facilitates the scheduling and routing of work items in the system. A client receives work items from the server and displays information therefrom to a participant. The client also receives data and control commands from the participant. A decision agent cooperates with the server in the scheduling of work items by considering participant-provided data and a branch expression associated with a current personal subflow activity.

26 Claims, 9 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 9

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

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10. Document ID: US 6424948 B1

L3: Entry 10 of 58   File: USPT   Jul 23, 2002

US-PAT-NO: 6424948
DOCUMENT-IDENTIFIER: US 6424948 B1

TITLE: Declarative workflow system supporting side-effects

DATE-ISSUED: July 23, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dong; Guozhu	Beavercreek	OH	45431	
Hull; Richard Baxter	Chatham	NJ	07928	
Kumar; Bharat	Scotch Plains	NJ	07076	
Su; Jianwen	Goleta	CA	93117	
Zhou; Gang	Basking Ridge	NJ	07920	

US-CL-CURRENT: 705/9; 705/8

ABSTRACT:

An object-focused workflow system for processing a received object in accordance with a declarative workflow specification. The specification includes modules and attributes, where module execution results in the evaluation of attributes, and may include the initiation of a side-effect action performed by an external component. Whether modules are to be executed for a particular received object is determined by associated enabling conditions. Attributes may be evaluated in accordance with computation rules and a combining policy, where the computation rules specify how values are to be contributed to an attribute, and the combining policy indicates how those contributed values are combined in order to assign a value to the attribute. Tasks in the workflow system may be executed eagerly in order to improve the performance of the workflow system. The eager evaluation of tasks includes the determination of whether such tasks are eligible for eager evaluation, and whether the tasks are unneeded or necessary for the processing of the received event. Workflows which satisfy described design properties allow for improved algorithms for the determination of the whether tasks are eligible, eager, and/or necessary. A graphical user interface is provided for displaying a representation of the evaluation status of the modules and attributes during workflow execution.

28 Claims, 50 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 56

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☑ 11.   Document ID: US 6421691 B1
L3: Entry 11 of 58   File: USPT   Jul 16, 2002

US-PAT-NO: 6421691
DOCUMENT-IDENTIFIER: US 6421691 B1

TITLE: Document management apparatus and method, a recording medium storing a
document management program, and a recording medium storing a decision-making
program

DATE-ISSUED: July 16, 2002

INVENTOR-INFORMATION:
NAME   CITY   STATE   ZIP CODE   COUNTRY
Kajitani; Tadahiro   Ishikawa   JP

US-CL-CURRENT: 715/500; 706/61

ABSTRACT:

The invention provides a document management apparatus and method and a recording
medium storing a document management program, which can display documents under
management without the user having to be conscious of the data structure of the
documents generated during the course of transactions. The invention also provides a
recording medium storing a decision making program which can display application
documents under management without the user having to be conscious of the data
structure of the application documents generated during the course of decision
making transactions. The document management apparatus comprises: a management
information generating means 1 for generating management information used to manage
a plurality of documents; a storage means 2 for relating the plurality of documents
with the management information generated by the management information generating
means 1 and storing the related documents and management information; and a display
control means 3 for making a display, based on the management information stored in
the storage means 2, to allow selection of one of the documents, and for displaying
the selected document in a display format as defined by the instruction data
contained in that document.

14 Claims, 18 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 14

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☑ 12.   Document ID: US 6415297 B1
L3: Entry 12 of 58   File: USPT   Jul 2, 2002

US-PAT-NO: 6415297
DOCUMENT-IDENTIFIER: US 6415297 B1

TITLE: Parallel database support for workflow management systems

DATE-ISSUED: July 2, 2002

INVENTOR-INFORMATION:
NAME   CITY   STATE   ZIP CODE   COUNTRY
Leymann; Frank   Aidlingen   DE
Roller; Dieter   Schoenaich   DE

US-CL-CURRENT: 707/201; 707/10, 707/8

ABSTRACT:

The invention suggests means for defining a portion of the system-repository of a
Workflow-Management-System (WFMS) or a system with comparable functionality to be
maintained in a parallel database by a Database-Management-System (DBMS). The WFMS
comprises at least one process-model. Moreover, it is suggested that the
definition-means for defining, which portions of the system repository is being
stored in the parallel database, is comprised in said WFMS's configuration
specifications as for instance in said process-model.

9 Claims, 4 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 4

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☐ 13.   Document ID: US 6401073 B1

L3: Entry 13 of 58   File: USPT   Jun 4, 2002

US-PAT-NO: 6401073
DOCUMENT-IDENTIFIER: US 6401073 B1

TITLE: Method and system for managing workflow

DATE-ISSUED: June 4, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tokuda; Tamayo	Ibaraki			JP
Mase; Hisao	Hirakata			JP
Tsuji; Hiroshi	Itami			JP

US-CL-CURRENT: 705/8; 705/1, 709/206, 709/207, 709/238

ABSTRACT:

A workflow managing system includes a workflow server for automatically extracting a
next workflow entrance location from an electronic document for management of the
next workflow entrance location. The workflow server analyzes the entered electronic
document to extract a document type candidate from the electronic document,
classifies the electronic document in accordance with the document type, refers to a
table showing a relationship between the document types and in-charge departments or
in-charge users associated therewith at the time of circulating the classified
electronic document, automatically extracts next workflow entrance location
candidate information for circulation of the sorted document type candidates, sends
the sorted electronic document to the user terminal of the next workflow entrance
location candidate, receives a signal indicative of acquisition or remand of the
document circulated from the document-circulated user terminal, judges accuracy or
inaccuracy of the next workflow entrance location candidate information, and
confirms the accuracy or inaccuracy of the circulation.

9 Claims, 28 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 22

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☐   14.   Document ID: US 6393456 B1

L3: Entry 14 of 58   File: USPT   May 21, 2002

US-PAT-NO: 6393456
DOCUMENT-IDENTIFIER: US 6393456 B1

TITLE: System, method, and computer program product for workflow processing using
internet interoperable electronic messaging with mime multiple content type

DATE-ISSUED: May 21, 2002

INVENTOR-INFORMATION:
NAME	CITY	STATE	ZIP CODE	COUNTRY
Ambler; Christopher	Redmond	WA		
Wallace; Andrew	Bellevue	WA		

US-CL-CURRENT: 709/200; 709/206, 709/218, 709/249

ABSTRACT:

A client computer in a communications network with a server computer assembles a
record set that has a MIME declaration header with a multipart content type and a
content sub-type indicative of a workflow media type. The first client computer also
assembles a binary file having therein an encoded workflow specification. The record
set is then transmitted with the binary file to the communications network. A second
client computer on the communications network receives both the record set and the
binary file and begins decoding the workflow specification. The second client
computer uses an application program to execute the decoded workflow specification
so as to perform all or a portion of the workflow process that is specified therein.
The workflow specification is optionally written in Extensible Mark-up Language
(XML).

22 Claims, 5 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 5

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☑   15.   Document ID: US 6349320 B1

L3: Entry 15 of 58   File: USPT   Feb 19, 2002

US-PAT-NO: 6349320
DOCUMENT-IDENTIFIER: US 6349320 B1

TITLE: Computer executable workflow management and control system

DATE-ISSUED: February 19, 2002

INVENTOR-INFORMATION:
NAME	CITY	STATE	ZIP CODE	COUNTRY
Emberton; William T.	Stonington	CT		
Ramgopal; Ramachandran	Andover	MA		

US-CL-CURRENT: 709/100

ABSTRACT:

A computer system executable method is provided for use in providing work items to a computer station from a database of work items. The method includes generating a sequence for providing at least some of the work items to the computer station and, before the sequence has been fully exhausted, e.g., when the sequence has become stale, generating a substitute sequence for providing at least some of the work items.

14 Claims, 9 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 9

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☐ 16.   Document ID: US 6349238 B1

L3: Entry 16 of 58   File: USPT   Feb 19, 2002

US-PAT-NO: 6349238
DOCUMENT-IDENTIFIER: US 6349238 B1

TITLE: System and method for managing the workflow for processing service orders among a variety of organizations within a telecommunications company

DATE-ISSUED: February 19, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gabbita; Swathibabu	Vienna	VA		
Goldfedder; Brandon	Reston	VA		
Hopson; Casey K.	Ellicott City	MD		
Park; Robert E.	Germantown	MD		
Troup; Dennis	Germantown	MD		

US-CL-CURRENT: 700/101; 700/100, 700/102

ABSTRACT:

A system and method for managing the workflow for processing Service Orders among a variety of organizations within a telecommunications company. The system and method coordinates all of the tasks and activities related to order processing among the various entities within the telecommunications company. Workflows are used to model business procedures used for processing Service Orders. Each workflow comprises a plurality of workflow steps. Business process models are depicted as workflow diagrams. Upon receipt of a Service Order, an appropriate Work Plan is selected based on information within the Service Order. Each workflow step is assigned a Resource and is scheduled for completion. The Workflow steps are then placed in In-boxes associated with the selected Resource. Once the processing steps have been scheduled, a current work step is calculated. Notification messages are sent to the appropriate systems to notify them to begin activity associated with the current work step. The system is automatically notified when the current work step is complete, so that the next work step can be processed in a similar fashion. Detailed statistical information is maintained for audit and reporting purposes. Users log-on to remote workstations coupled with a company-wide Intranet or the like. From the remote workstations, users from various organizations view their In-boxes and other detailed information about Service Orders according to selectable requests. Workflow steps can be transferred and re-assigned using the remote workstations. Detailed statistical information is maintained for audit and reporting purposes. Reports reflecting the effectiveness of workforce management and work administration is obtained.

34 Claims, 8 Drawing figures

Exemplary Claim Number: 1
Number of Drawing Sheets: 8

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☑ 17. Document ID: US 6308224 B1

L3: Entry 17 of 58   File: USPT   Oct 23, 2001

US-PAT-NO: 6308224
DOCUMENT-IDENTIFIER: US 6308224 B1

TITLE: Method of generating an implementation of a workflow process model in an
object environment

DATE-ISSUED: October 23, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Leymann; Frank	Aidlingen			DE
Roller; Dieter	Schonaich			DE

US-CL-CURRENT: 709/310; 709/202, 709/318

ABSTRACT:

A method of extending the specifications of a process model within a workflow
process environment is disclosed. The process model defines a process activity
managed and executed by at least one computer system. The method of extending links
the process model with an object environment within which the process activity is to
be implemented. This link is realized by a step of relating the process model to at
least one object class and one object method residing within the object environment
and implementing a process activity. The method of extending also relates the fields
of the input and output containers with the input and output parameters of the
related object method. Furthermore the method of extending relates and maps
exceptions which might be signaled by the related object method within the object
environment to return code fields of the process model. In conjunction with the
method of extending the specifications of a process model there is also disclosed a
computerized method for automatically generating an implementation of a process
model managed and executed by at least one computer system.

36 Claims, 24 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 11

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☐ 18. Document ID: US 6298352 B1

L3: Entry 18 of 58   File: USPT   Oct 2, 2001

US-PAT-NO: 6298352
DOCUMENT-IDENTIFIER: US 6298352 B1

TITLE: Apparatus and method for managing number sources

DATE-ISSUED: October 2, 2001

```
INVENTOR-INFORMATION:
NAME                            CITY              STATE   ZIP CODE    COUNTRY
Kannan; Sivaramakrishna         Chantilly         VA
Parkins; Dan M.                 Silver Spring     MD
```

US-CL-CURRENT: 707/102; 379/201.01, 707/104.1

ABSTRACT:

A number resource management system for automatically managing number resources
implements a Web-based client-server application for accessing and updating
information pertaining to a number resource in a stored repository of number
resources. Each number resource has an associated unique customer identifier and an
associated status attribute. A Web/browser-based interface device enables
communication between a business client and an accessing server, the interface
device directing the server to retrieve and update information relating to a number
resource according to a unique customer identifier and/or a status attribute input.

35 Claims, 13 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 13

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| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |      | KWIC | Draw Desc | Image |
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☑ 19.   Document ID: US 6278977 B1

L3: Entry 19 of 58   File: USPT   Aug 21, 2001

US-PAT-NO: 6278977
DOCUMENT-IDENTIFIER: US 6278977 B1

TITLE: Deriving process models for workflow management systems from audit trails

DATE-ISSUED: August 21, 2001

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INVENTOR-INFORMATION:
NAME                  CITY          STATE      ZIP CODE    COUNTRY
Agrawal; Rakesh       San Jose      CA
Leymann; Frank        Aidlingen                            DE
Roller; Dieter        Schonaich                            DE
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US-CL-CURRENT: 705/7

ABSTRACT:

The present invention relates to the area of workflow management systems (WFMS).
More particularly the invention is related to a methodology of automatically
deriving and steadily improving a process model executed by the WFMS. The current
invention dramatically simplifies and automates the process of model a business
model of a business process. The invention allows to start just with set of
unrelated activities and discover the real world relations between them at a later
point in time; data mining and OLAP technologies are exploited for this discovery.
The current invention thus proposes a posteriori methodology. For that purpose the
precise underlying process model is derived at a later point in time based on audit
data collected by the WFMS during the early deployment of a process model.

8 Claims, 4 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 3

☑ 20.   Document ID: US 6272672 B1
L3: Entry 20 of 58   File: USPT   Aug 7, 2001

US-PAT-NO: 6272672
DOCUMENT-IDENTIFIER: US 6272672 B1

TITLE: Dataflow processing with events

DATE-ISSUED: August 7, 2001

INVENTOR-INFORMATION:
NAME   CITY   STATE   ZIP CODE   COUNTRY
Conway; Melvin E.   Beverly   MA   01915

US-CL-CURRENT: 717/107; 717/108

ABSTRACT:

Interactive event-driven programs are structured and executed using two types of
constructs: interconnectable processing components and flow objects with associated
data. Components are interconnected in a hierarchical dataflow network, and
references which provide access to flow objects flow on the interconnections.
Response to events and bidirectional coordination over multicomponent data paths,
even in a distributed object system, employ unidirectional dataflows and
intercomponent message sequences mediated by flow objects. Scaling and abstraction
of complexity are facilitated by encapsulation of constructed networks into new
component definitions. An interactive debugger preserves state as an executing
program is edited, permitting an event-driven program to be modified in the
intervals between processing of events without reinitialization. A component
protection method employs multiple Levels of usage authorization within components,
enabling developers to define and distribute new protected components in a
decentralized component market.

151 Claims, 115 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 77

☑ 21.   Document ID: US 6237020 B1
L3: Entry 21 of 58   File: USPT   May 22, 2001

US-PAT-NO: 6237020
DOCUMENT-IDENTIFIER: US 6237020 B1

TITLE: Task-oriented automatic distribution of software

DATE-ISSUED: May 22, 2001

INVENTOR-INFORMATION:
NAME   CITY   STATE   ZIP CODE   COUNTRY
Leymann; Frank   Aidlingen   DE
Roller; Dieter   Schonaich   DE

US-CL-CURRENT: <u>709</u>/<u>201</u>; <u>709</u>/<u>203</u>

ABSTRACT:

Methods, systems and computer program products are provided for automatically distributing software to a target computer system by obtaining a computer-system-description of the target-computer-system and at least one process-model of a <u>workflow-management-system</u> (WFMS) which includes an activity to be carried out by the target computer system. The software requirements of the target computer system are determined based upon the process model of the WFMS and the computer-system-description of the target computer system. The determined software requirements are then provided to a software distribution management system (SDMS) to distribute the determined software to the target computer system.

30 Claims, 8 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 7

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☐   22.   Document ID: US 6151583 A

L3: Entry 22 of 58   File: USPT   Nov 21, 2000

US-PAT-NO: 6151583
DOCUMENT-IDENTIFIER: US 6151583 A

TITLE: Workflow management method and apparatus

DATE-ISSUED: November 21, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ohmura; Yoshihide	Yokohama			JP
Kobayashi; Takashi	Kawasaki			JP
Sakai; Katsuaki	Tokyo			JP
Nagai; Nobuo	Kawasaki			JP
Ogoshi; Shoko	Kawasaki			JP

US-CL-CURRENT: <u>705</u>/<u>8</u>; <u>705</u>/<u>11</u>, <u>705</u>/<u>9</u>

ABSTRACT:

A workflow management method in a workflow system including a workflow server and tables for holding processes includes storing in a table a plurality of definition information sets for individually defining workflows for a plurality of processes included in a job for processing a plurality of works to be circulated, wherein the plurality of definition information sets each have a process ID, a process name, and a user role ID, and at least one of the plurality of definition information set has predetermined data for connecting processing defined by another definition information set in the user role ID, and storing in a table a work management information set created for each of the plurality of works subjected to processing by the job, the work management information set having a process ID, a process name, a user role ID, and a flag representative of whether or not workflow processing corresponding to processing of each work has been terminated. The process ID has a process ID indicative of the location of the other definition information set when the user role ID includes the first predetermined code indicating that the workflow processing is defined in the other definition information set. After copying and updating one of the plurality of stored definition information sets, the one definition information set can be stored in the table. A table can be provided for storing therein a process management information set having a utilization permission flag indicative of whether or not the plurality of definition information sets,

stored in the table, may be copied. A table can also be provided for storing a suspended work information set including an ID of one of the plurality of works to be circulated, and a workflow ID indicative of a workflow in which the one work should be suspended.

29 Claims, 14 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 11

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☐   23.   Document ID: US 6144975 A

L3: Entry 23 of 58   File: USPT   Nov 7, 2000

US-PAT-NO: 6144975
DOCUMENT-IDENTIFIER: US 6144975 A

TITLE: Computer system for intelligent document management

DATE-ISSUED: November 7, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Harris, Jr.; Allen W.	Briarcliff Manor	NY		
Liberatore; Kurt E.	Franklin	MA		
Persels; Shawn D.	Northboro	MA		

US-CL-CURRENT: 715/500

ABSTRACT:

A computer system includes several inputs for receiving documents being transmitted via different media, and several outputs for transmitting outgoing documents via different media. An input component is coupled to each of the inputs and an output component is coupled to each of the outputs. The input component and the output component each communicate with a processing system providing database services. The input component converts requests communicated through inputs into service items that typically include at least one document production item. Service items are communicated to the processing system, which tracks them. The processing system passes the service items on to the output component, which instructs appropriate ones of the outputs to produce output documents. Each of the input manager and output manage communicate with the processing system via a generalized API, and communicates with respective inputs and outputs via API's specific to those machines. The input manager and the output manager thereby serve as functional abstraction layers between the processing system and the document inputs and outputs.

6 Claims, 5 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 5

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☐   24.   Document ID: US 6144955 A

L3: Entry 24 of 58   File: USPT   Nov 7, 2000

US-PAT-NO: 6144955

DOCUMENT-IDENTIFIER: US 6144955 A

TITLE: Work flow management system

DATE-ISSUED: November 7, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tsuiki; Kazuyasu	Osaka			JP
Majima; Hiroshi	Yokohama			JP
Ono; Hisashi	Yokohama			JP
Suga; Kazuhiro	Ibaraki			JP
Toge; Tetsuji	Kobe			JP
Akifuji; Shunsuke	Wako			JP

US-CL-CURRENT: 707/1; 705/26, 705/7, 705/8, 705/9, 707/100, 707/201

ABSTRACT:

A work flow management system has circulation control functions for carrying out branching, queuing, dividing, broadcasting, recovering, holding and substitute of a circulation material in the work flow system that carries out an automatic sequential circulation of electronic information. Thus, a work requiring a complex circulation control can be done by an electronic system. The work flow management system includes a circulation material sending and receiving unit which has functions of entering, sending, receiving, referencing and updating a circulation material for the users who are the subscribers of the work flow system, the circulation material defining unit which defines a circulation destination and the circulation control for the users who manage the work flow, and the circulation material control unit which circulates a circulation material in accordance with circulation definitions defined by the circulation material defining unit.

21 Claims, 19 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 16

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☐ 25.   Document ID: US 6138088 A

L3: Entry 25 of 58   File: USPT   Oct 24, 2000

US-PAT-NO: 6138088
DOCUMENT-IDENTIFIER: US 6138088 A

TITLE: Method and apparatus for process control by using natural language processing (NLP) technology

DATE-ISSUED: October 24, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Goeser; Sebastian	Stuttgart			DE

US-CL-CURRENT: 704/9; 704/1, 705/7

ABSTRACT:

Natural language processing is used in a method and apparatus for the computer-backed control of business processes and process sequences. The method involves the automatic checking of at least one of the conditions of an activity of

the business process using a method of natural language processing. Control of the process conditions of activities which currently checked by humans can be checked automatically.

16 Claims, 5 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 5

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☐ 26.   Document ID: US 6122633 A

L3: Entry 26 of 58   File: USPT   Sep 19, 2000

US-PAT-NO: 6122633
DOCUMENT-IDENTIFIER: US 6122633 A

TITLE: Subscription within workflow management systems

DATE-ISSUED: September 19, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Leymann; Frank	Aidlingen			DE
Roller; Dieter	Schonaich			DE

US-CL-CURRENT: 707/10; 705/4, 705/8, 705/9, 707/1, 707/103R, 707/200, 709/313

ABSTRACT:

The present invention relates to the area of workflow management systems (WFMS). More particularly the inventions extends WFMS by subscription means. The subscription means operate on an audit trail stored within a database. The subscription means may encompass a multitude of subscription monitors. Subscription monitors allow to subscribe to the audit trail, i.e. to formulate certain interests as subscription selectors on

information entered into the audit trail. A subscription monitor autonomously checks the audit trail for subscribed audit records. If such audit records have been determined the subscription monitor executes a subscription actuator, i.e. a pre-defined program. The subscription actuator may inform the subscriber on the subscribed audit record or may start any type of program. The current invention teaches to implement the subscription monitors as database triggers of the database storing the audit trail. The subscription selectors are realized as search conditions of the database trigger. Finally the subscription actuator can be implemented according the current teaching as user-defined functions of the database.

4 Claims, 3 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 1

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☐ 27.   Document ID: US 6122409 A

L3: Entry 27 of 58   File: USPT   Sep 19, 2000

US-PAT-NO: 6122409

DOCUMENT-IDENTIFIER: US 6122409 A

TITLE: System and method for digitally capturing a product image

DATE-ISSUED: September 19, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Boggs; Eddie	Asheboro	NC		
Cano; Juan	Kernersville	NC		
Fang; Frank W.	Great Falls	VA		
Fisher; Jochen	Elon College	NC		
Harrison; Ash	Greensboro	NC		
Huang; Andy	Greensboro	NC		

US-CL-CURRENT: 382/276; 348/552, 382/286, 382/305, 700/83

ABSTRACT:

A system for digitally capturing a product image includes a digital camera, a computer interfaced with the digital camera and programmed to provide a graphical interface including indicators relating to the exposure setting of the camera, the resolution image size of the image to be captured and the product identification number. The camera is controlled through the operation of a pointing device, such as a mouse and "buttons" displayed on the interface including setting the camera in a remote control mode, capturing a product image, selecting an image resolution, saving an image and resetting the system for digital capture of the next product image. A sensing device such as a bar code scanner is provide for recording the product number and inputting the number into the computer. Captured product image data is saved to a database along with product dimensions. One or more processors are used to process the data to crop, resize and silhouette the product image. The final product image is stored on storage media such magnetic tape or a compact disk for subsequent use. The final image may be used for electronic advertising, for example over the Internet, for preparing transparencies and for preparing conventional printed advertisements.

20 Claims, 5 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 5

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☐ 28.   Document ID: US 6115646 A

L3: Entry 28 of 58   File: USPT   Sep 5, 2000

US-PAT-NO: 6115646
DOCUMENT-IDENTIFIER: US 6115646 A

TITLE: Dynamic and generic process automation system

DATE-ISSUED: September 5, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Fiszman; Sergio Adrian	Nepean			CA
Benwell; Jason	Gloucester			CA
Sodhi; Ari	Nepean			CA

US-CL-CURRENT: 700/181; 700/104, 700/17, 700/2, 700/246, 700/247, 700/250, 700/49,

700/<u>83</u>, 700/<u>86</u>

ABSTRACT:

GPAE is a dynamic and generic object-oriented process automation engine that provides workflow management (WFM) services in a heterogeneous distributed computing environment. This invention decouples process definitions, run-time process management, and process execution agents. The system consists of three major parts: (a) a build time part used to capture and store process definitions, and to request the enactment of a process; (b) a run time part used to schedule, execute, and monitor the requested process; (c) a CORBA bus to plug-in software applications needed to execute processes, and to allow interactions among the system components. This GPAE invention, based on CORBA, and event-driven and constraint propagation models, provides near optimal scheduling and resource allocation schemes. This invention is generic, scalable, flexible, and enables the process automation in a distributed heterogeneous platform environment, while sharing global resources and services efficiently.

15 Claims, 21 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 19

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☑ 29.   Document ID: US 6088679 A

L3: Entry 29 of 58   File: USPT   Jul 11, 2000

US-PAT-NO: 6088679
DOCUMENT-IDENTIFIER: US 6088679 A

TITLE: Workflow management employing role-based access control

DATE-ISSUED: July 11, 2000

INVENTOR-INFORMATION:
NAME	CITY	STATE	ZIP CODE	COUNTRY
Barkley; John	Darnestown	MD		

US-CL-CURRENT: 705/<u>8</u>; 705/<u>9</u>

ABSTRACT:

A workflow sequence specified by a process definition is managed by a <u>workflow management system</u> which enacts each segment in the order specified by that process definition. Role-based access control (RBAC) is used to define membership of individuals in groups, i.e., to assign individuals to roles, and to then activate the roles with respect to the process at appropriate points in the sequence. Any individual belonging to the active role can perform the next step in the business process. Changes in the duties and responsibilities of individuals as they change job assignments are greatly simplified, as their role memberships are simply reassigned; the workflow process is unaffected.

4 Claims, 2 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 1

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

     ☑   30.   Document ID: US 6078982 A

L3: Entry 30 of 58   File: USPT   Jun 20, 2000

US-PAT-NO: 6078982
DOCUMENT-IDENTIFIER: US 6078982 A

TITLE: Pre-locking scheme for allowing consistent and concurrent workflow process
execution in a workflow management system

DATE-ISSUED: June 20, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Du; Weimin	San Jose	CA		
Shan; Ming-Chien	Saratoga	CA		
Elmagarmid; Ahmed	Lafayette	IN		

US-CL-CURRENT: 710/200; 707/8, 710/240, 710/244

ABSTRACT:

A system for allowing consistent execution of a workflow process in a
computer-enabled workflow management system is described. The system includes a
workflow process database accessible by the workflow process. The workflow process
includes at least one sequence of workflow actions, having at least one set of
parallel workflow actions and being configured as a plurality of nodes
interconnected by arcs. Each node defines at least one of the workflow actions and
reading and writing data items when executing the workflow actions. A first module
is provided to lock all data items in the workflow process database that are
specified for access by the workflow process from being accessed by other workflow
processes during execution of the workflow process before the execution of the
workflow process is commenced. A second module is provided to release all the locked
data items from being locked after the workflow process has been executed such that
execution consistency and concurrency of the workflow process is maintained. A
computer implemented method for allowing consistent execution of a workflow process
in a computer-enabled workflow management system is also described.

10 Claims, 9 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 8

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

     ☐   31.   Document ID: US 6073111 A

L3: Entry 31 of 58   File: USPT   Jun 6, 2000

US-PAT-NO: 6073111
DOCUMENT-IDENTIFIER: US 6073111 A

TITLE: Container materialization/dematerialization for reduced dataload and improved
data-coherency in workflow-management systems

DATE-ISSUED: June 6, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Leymann; Frank	Aidlingen			DE
Roller; Dieter	Schonaich			DE

US-CL-CURRENT: <u>705/8</u>; <u>705/1</u>, <u>705/32</u>, <u>705/7</u>, <u>705/9</u>

ABSTRACT:

The present invention relates to the field of integration of applications that are executed by computer systems. In an additional focus, the current invention improves the integration of applications within workflow management systems. The basic approach of the invention to this problem are the features of input container materialization programs and output container dematerialization programs. The materialization programs are executed for an input container before the input container is passed to a process activity. The purpose of the materialization programs is to perform materialization of the input container by retrieving its data members' contents from arbitrary storage areas and/or by manipulating the data-member's contents. The de-materialization programs are executed after a process activity completed execution, and their purpose is to perform de-materialization of the output container by manipulating its data-members' contents and/or storing its data members' contents to arbitrary storage areas.

15 Claims, 2 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 2

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☐ 32. Document ID: US 6073109 A

L3: Entry 32 of 58   File: USPT   Jun 6, 2000

US-PAT-NO: 6073109
DOCUMENT-IDENTIFIER: US 6073109 A

TITLE: Computerized method and system for managing business processes using linked workflows

DATE-ISSUED: June 6, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Flores; Fernando	Berkeley	CA		
Bell, III; Chauncey F.	Alameda	CA		
Flores; Pablo A.	Alameda	CA		
Flores; Rodrigo F.	Berkeley	CA		
Icaza; Raul Medina-Mora	Mexico City			MX
McAfee; John A.	Kensington	CA		
Nunez; Manuel Jasso	Alameda	CA		
Buchler; Thomas G.	Berkeley	CA		
White; Thomas E.	Monte Sereno	CA		
Redenbaugh; Russell G.	Philadelphia	PA		
Saldivar; Juan Ludlow	Mexico City			MX
Winograd; Terry A.	Stanford	CA		
Dunham; Robert P.	Pleasanton	CA		
Wong; Harry K. T.	Danville	CA		
Gift; Roy I.	San Anselmo	CA		

US-CL-CURRENT: <u>705/8</u>; <u>707/10</u>, <u>709/203</u>, <u>709/205</u>, <u>709/219</u> ·

ABSTRACT:

A system for analyzing and structuring business processes implemented in software to provides businesses with tools to manage business processes. The system i) notifies the user that he or she has a step to begin or to complete; ii) provides the user with the proper tools to complete a task; iii) provides the user with the proper information to complete a task; iv) allows the user to see where a task fits in the overall process; v) manages proper reminders, alerts, and follow-ups to keep the process moving; vi) automates certain standard procedures; vii) integrates with the organization's existing business systems; and viii) provides application program interfaces that allow developers to develop applications that are workflow-enabled. The system utilizes a workflow server including a transactions manager and a database.

19 Claims, 6 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 6

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☐   33.   Document ID: US 6067548 A

L3: Entry 33 of 58   File: USPT   May 23, 2000

US-PAT-NO: 6067548
DOCUMENT-IDENTIFIER: US 6067548 A

TITLE: Dynamic organization model and management computing system and method therefor

DATE-ISSUED: May 23, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Cheng; Edward C.	South San Francisco	CA		

US-CL-CURRENT: 707/103R; 707/101, 707/104.1

ABSTRACT:

The present invention provides a dynamic organizational database as an underlying information system to support collaborative computing in a global enterprise. This information system is built based on the Organizational Modeling and Management model (OMM) and provides a system architecture and a graphical user interface for easy manipulation of organizational objects. Contrary to traditional approaches, the present invention separates the organization model from the process model, the application model and the data model. Thus, independent and flexible enterprise modeling and design is allowed to reflect more realistically a rapidly changing business environment.

30 Claims, 11 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 8

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☑   34.   Document ID: US 6065009 A

L3: Entry 34 of 58   File: USPT   May 16, 2000

US-PAT-NO: 6065009

DOCUMENT-IDENTIFIER: US 6065009 A

TITLE: Events as activities in process models of workflow management systems

DATE-ISSUED: May 16, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Leymann; Frank	Aidlingen			DE
Roller; Dieter	Schonaich			DE

US-CL-CURRENT: 707/10; 707/9, 714/15

ABSTRACT:

WFMS execute a multitude of process models consisting of a network of potentially distributed activities. Within this structure is the implementation of events within WFMS like any other process activity. Thus events are implemented as event-activities, a special type of an activity within said WFMS. Such an event-activity can manage an event occurring internal or external to the WFMS.

15 Claims, 10 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 7

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☐ 35.   Document ID: US 6058413 A

L3: Entry 35 of 58   File: USPT   May 2, 2000

US-PAT-NO: 6058413
DOCUMENT-IDENTIFIER: US 6058413 A

TITLE: Method and apparatus for utilizing a standard transaction format to provide application platform and a medium independent representation and transfer of data for the management of business process and their workflows

DATE-ISSUED: May 2, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Flores; Rodrigo F.	Berkeley	CA		
Flores; Pablo A.	Alameda	CA		
Icaza; Raul Medina-Mora	Mexico City			MX
White; Thomas E.	Monte Sereno	CA		
McAfee; John A.	Kensington	CA		
Nunez; Manuel Jasso	Alameda	CA		
Buchler; Thomas G.	Berkeley	CA		
Gift; Roy I.	San Anselmo	CA		

US-CL-CURRENT: 709/101; 705/7

ABSTRACT:

The present invention is a method and apparatus which is used to enable application developers to generate workflow enabled applications which request services from the workflow server component of the workflow system, remotely and indirectly using messaging, shared databases or inter-process communications. The present invention provides a standard transaction format (STF) for accessing such a workflow system

through STF processors via messaging, updates to the shared databases or
inter-process communications. Workflow enabled applications are used by users to act
and participate in business processes and enable users and managers to observe and
query the status of workflows and business processes.

11 Claims, 7 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 7

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☑ 36.   Document ID: US 6052684 A

L3: Entry 36 of 58   File: USPT   Apr 18, 2000

US-PAT-NO: 6052684
DOCUMENT-IDENTIFIER: US 6052684 A

TITLE: System and method for performing consistent workflow process execution in a
workflow management system

DATE-ISSUED: April 18, 2000

INVENTOR-INFORMATION:
NAME	CITY	STATE	ZIP CODE	COUNTRY
Du; Weimin	San Jose	CA		

US-CL-CURRENT: 707/8; 707/9

ABSTRACT:

A system for allowing consistent execution of a workflow process in a
computer-enabled workflow management system is described. The workflow process
includes at least one sequence of workflow actions, having at least one set of
parallel workflow actions and being configured as a number of nodes interconnected
by arcs. Each node defines and executes at least one of the workflow actions. The
system includes a workflow process database accessible by the nodes of the workflow
process to read and write data items when executing the workflow actions. The system
also includes a module for maintaining execution consistency among the workflow
actions when the nodes access the workflow process database to read and write the
data items in carrying out the workflow actions. A computer-implemented method for
consistently executing a workflow process in a workflow management system is also
described.

8 Claims, 10 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 10

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☑ 37.   Document ID: US 6041306 A

L3: Entry 37 of 58   File: USPT   Mar 21, 2000

US-PAT-NO: 6041306
DOCUMENT-IDENTIFIER: US 6041306 A

TITLE: System and method for performing flexible workflow process execution in a
distributed workflow management system

DATE-ISSUED: March 21, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Du; Weimin	San Jose	CA		
Davis; James W.	Sunnyvale	CA		
Pfeifer; Clemens	Sunnyvale	CA		
Shan; Ming-Chien	Saratoga	CA		
Sheard; Nicolas	Palo Alto	CA		

US-CL-CURRENT: 705/8; 705/7

ABSTRACT:

A system and method for performing flexible workflow process execution in a
distributed workflow management system is described. The distributed workflow
management system is formed by a computer network comprising a plurality of
computers. Each computer has a processor, memory and input/output facilities. A
workflow process management system operates on one or more of the computers to
control the computer network in executing the workflow process. The workflow process
includes at least one sequence of multiple actions. A plurality of resources is
coupled to respective ones of the computers to carry out the multiple actions. A
plurality of state machines are stored as computer-operable code in at least one
memory and include a plurality of states interconnected by arcs logically forming a
directed graph. The workflow management system further includes logic for
instantiating each action with one state and logic for executing the logical
sequence of the action as state transitions in each state machine.

7 Claims, 12 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 10

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☑ 38.   Document ID: US 6038541 A

L3: Entry 38 of 58   File: USPT   Mar 14, 2000

US-PAT-NO: 6038541
DOCUMENT-IDENTIFIER: US 6038541 A

TITLE: Method and system for managing workflow of electronic documents

DATE-ISSUED: March 14, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tokuda; Tamayo	Ibaraki			JP
Mase; Hisao	Hirakata			JP
Tsuji; Hiroshi	Itami			JP

US-CL-CURRENT: 705/8; 379/100.08, 379/93.24, 709/206, 709/207, 709/238

ABSTRACT:

A workflow managing system includes a workflow server for automatically extracting a
next workflow entrance location from an electronic document for management of the
next workflow entrance location. The workflow server analyzes the entered electronic
document to extract a document type candidate from the electronic document,

classifies the electronic document in accordance with the document type, refers to a table showing a relationship between the document types and in-charge departments or in-charge users associated therewith at the time of circulating the classified electronic document, automatically extracts next workflow entrance location candidate information for circulation of the sorted document type candidates, sends the sorted electronic document to the user terminal of the next workflow entrance location candidate, receives a signal indicative of acquisition or remand of the document circulated from the document-circulated user terminal, judges accuracy or inaccuracy of the next workflow entrance location candidate information, and confirms the accuracy or inaccuracy of the circulation.

7 Claims, 28 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 22

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☐   39.   Document ID: US 6038538 A

L3: Entry 39 of 58   File: USPT   Mar 14, 2000

US-PAT-NO: 6038538
DOCUMENT-IDENTIFIER: US 6038538 A

TITLE: Generating process models from workflow logs

DATE-ISSUED: March 14, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Agrawal; Rakesh	San Jose	CA		
Gunopulos; Dimitrios	San Jose	CA		
Leymann; Frank	Aidlingen			DE
Roller; Dieter Helmut	Schoenaich			DE

US-CL-CURRENT: 705/7; 700/150, 700/18, 705/1, 707/10, 707/9, 709/201, 709/202, 709/321, 709/328

ABSTRACT:

A computer-implemented method, apparatus, and article of manufacture that constructs graph models from logs of past, unstructured executions of the given process. The graph model so produced conforms to the dependencies and past executions present in the log. By providing graph models that capture the previous executions of the process, this technique allows easier introduction of a workflow system and evaluation and evolution of existing processes.

49 Claims, 22 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 9

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☑   40.   Document ID: US 6028997 A

L3: Entry 40 of 58   File: USPT   Feb 22, 2000

US-PAT-NO: 6028997

DOCUMENT-IDENTIFIER: US 6028997 A

TITLE: Method of generating an implementation of reusable parts from containers of a workflow process-model

DATE-ISSUED: February 22, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Leymann; Frank	Aidlingen			DE
Roller; Dieter	Schonaich			DE

US-CL-CURRENT: 717/104; 345/764, 345/965, 345/967, 705/11, 705/7, 717/108

ABSTRACT:

Method for automatically generating an implementation of input and output container reusable parts for a process model managed and executed by at least one computer system. The method of generating uses the specification of a process model extended by specifications associating the process model to a reusable part environment outside the workflow process environment and generates an implementation of said input and output containers as reusable parts residing within said reusable parts environment. The method of generating comprises an analysis of the specifications of said process model. Based on this analysis the method generates the associated input container reusable parts and associated output container reusable parts as implementations of said input and output containers.

20 Claims, 13 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 12

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☑ 41.   Document ID: US 6014673 A

L3: Entry 41 of 58   File: USPT   Jan 11, 2000

US-PAT-NO: 6014673
DOCUMENT-IDENTIFIER: US 6014673 A

TITLE: Simultaneous use of database and durable store in work flow and process flow systems

DATE-ISSUED: January 11, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Davis; James W.	Sunnyvale	CA		
Du; Weimin	San Jose	CA		
Shan; Ming Chien	Saratoga	CA		
Sheard; Nicholas	Palo Alto	CA		

US-CL-CURRENT: 707/202; 705/8

ABSTRACT:

A method and apparatus for reliable high-speed access to a database system that stores system data in a non-volatile database, stores current data in an online database object cache, the current data reflecting at least a portion of the system data in the non-volatile database and the online database object cache providing the database system with the capability of querying and updating the current data in the

online database object cache, logging each message in the database system as an
entry in a durable log file, and periodically committing the current data in the
online database object cache to the non-volatile database.

14 Claims, 16 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 12

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☑ 42.   Document ID: US 6011917 A

L3: Entry 42 of 58   File: USPT   Jan 4, 2000

US-PAT-NO: 6011917
DOCUMENT-IDENTIFIER: US 6011917 A

TITLE: Method and computer system for generating process management computer
programs from process models

DATE-ISSUED: January 4, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Leymann; Frank	Aidlingen			DE
Roller; Dieter	Schonaich			DE

US-CL-CURRENT: 717/104; 717/108

ABSTRACT:

A method is described for generating computer programs from process models, e.g.,
C++ computer programs. The generation of a computer program is based linearizing a
process graph with respect to the sequence of activity execution, associating
process model constructs to classes and methods of an object-oriented programming
technique, and representing activities and data items as instances of classes. The
generated computer programs can be compiled into executables and executed on a
computer system. Advantageously, process instances can be executed on a computer
system with significantly less resource consumption for managing the process
instances.

14 Claims, 44 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 32

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☑ 43.   Document ID: US 6009405 A

L3: Entry 43 of 58   File: USPT   Dec 28, 1999

US-PAT-NO: 6009405
DOCUMENT-IDENTIFIER: US 6009405 A

TITLE: Ensuring atomicity for a collection of transactional work items in a workflow
management system

DATE-ISSUED: December 28, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Leymann; Frank	Aidlingen			DE
Roller; Dieter	Schonaich			DE

US-CL-CURRENT: <u>705/9</u>; <u>705/1</u>, <u>705/7</u>, <u>705/8</u>

ABSTRACT:

A computerized transaction execution with a workflow management systems (WFMS) executes a process model consisting of a network of potentially distributed activities including transactional work items. A computerized methodology defines, controls and processes a collection of a transactional work items ensuring the atomicity of the collection of transactional work items. The collection of transactional work items owns a separate commit scope not influenced by a commit scope potentially implemented within said transactional work items. The WFMS is enabled to infer details of the process model of collections of transactional work items which can be processed in the sense of global transactions with a common commit scope. Transactional work items with a common commit scope are combined into atomic spheres. The collection of transactional work items constitute a common atomic sphere in an alternative embodiment.

18 Claims, 8 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 8

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Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments        KWIC | Draw Desc | Image
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☑ 44.   Document ID: US 6006193 A

L3: Entry 44 of 58   File: USPT   Dec 21, 1999

US-PAT-NO: 6006193
DOCUMENT-IDENTIFIER: US 6006193 A

TITLE: Computer executable workflow control system

DATE-ISSUED: December 21, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gibson; Kenneth U.	West Valley City	UT	84119	
Turley; William N.	Sandy	UT	84093	
Schapiro; Jonathan	Sudbury	MA	01776	

US-CL-CURRENT: <u>705/8</u>; <u>707/10</u>, <u>707/201</u>

ABSTRACT:

To control the processing of a work item, the work item is stored in a database of work items and is executed by an operator. Organizations use the database, and the operator belongs to one of the organizations. Organization identifiers are associated with corresponding organizations, and definitional data items are associated with corresponding organization identifiers. The definitional data items define rules that can be altered after the system is initially configured and while the system is running.

32 Claims, 11 Drawing figures
Exemplary Claim Number: 16
Number of Drawing Sheets: 8

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`| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |`   `| KWIC | Draw Desc | Image |`

☐   45.   Document ID: US 6003011 A

L3: Entry 45 of 58   File: USPT   Dec 14, 1999

US-PAT-NO: 6003011
DOCUMENT-IDENTIFIER: US 6003011 A

TITLE: <u>Workflow management system</u> wherein ad-hoc process instances can be generalized

DATE-ISSUED: December 14, 1999

INVENTOR-INFORMATION:
NAME	CITY	STATE	ZIP CODE	COUNTRY
Sarin; Sunil K.	Watertown	MA		
Layton; Alexis	Cambridge	MA		

US-CL-CURRENT: <u>705/9</u>; <u>705/8</u>

ABSTRACT:

In workflow management software, task objects describing a successfully-completed workflow process instance are copied. The copied task objects are then generalized in the relevant variables thereof, so that the entire workflow process is thus generalized for direct re-use in an amended workflow process definition. In this way, ad-hoc amendments to the workflow process, such as those initiated by the persons who collaborate in the work process, can be easily incorporated into a new work process.

3 Claims, 4 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 7

`| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |`   `| KWIC | Draw Desc | Image |`

☑   46.   Document ID: US 5999911 A

L3: Entry 46 of 58   File: USPT   Dec 7, 1999

US-PAT-NO: 5999911
DOCUMENT-IDENTIFIER: US 5999911 A

TITLE: Method and system for managing workflow

DATE-ISSUED: December 7, 1999

INVENTOR-INFORMATION:
NAME	CITY	STATE	ZIP CODE	COUNTRY
Berg; William C.	Beaverton	OR		
McCallum; Darcy J.	Salem	OR		
Newman; Reynaldo W.	West Linn	OR		

US-CL-CURRENT: <u>705/9</u>; <u>705/7</u>, <u>705/8</u>

ABSTRACT:

A workflow manager system provides computer-assisted, graphical tools for defining
and managing complex processes in terms of a workflow. A workflow includes a number
of steps having step encapsulations and dependency relationships. Step
encapsulations define the work to be performed by a step in a work flow such as
launching a design tool. The dependency relationships represent the conditions that
must be satisfied before a step can be performed and can be expressed in terms of
boolean relationships using step and data states or data values as arguments. The
workflow system manages the state of a workflow including the state of steps and
data, and makes the workflow and its related data accessible to multiple users.

35 Claims, 15 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 14

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☐ 47. Document ID: US 5999910 A

L3: Entry 47 of 58   File: USPT   Dec 7, 1999

US-PAT-NO: 5999910
DOCUMENT-IDENTIFIER: US 5999910 A

TITLE: Processing a workflow item

DATE-ISSUED: December 7, 1999

INVENTOR-INFORMATION:
NAME	CITY	STATE	ZIP CODE	COUNTRY
Rosenfeld; Kurt A.	Medfield	MA		
Gibson; Kenneth U.	West Jordan	UT		
Bisantz; Robert C.	Sandy	UT		

US-CL-CURRENT: 705/7; 345/700, 345/733, 705/32, 705/38

ABSTRACT:

A computer-based method is provided for use in processing a work item in an
automated workflow system. Suspension information relating to a previous suspension
of the work item is stored. Based on the suspension information or the indication of
the current time, it is determined whether processing of the work item is permitted
to be suspended. A recommended resume time is determined that constitutes a time
that is permitted to be selected for when processing of the work item is to resume,
and the recommended resume time is displayed to an operator before the operator
causes processing of the work item to be suspended. After processing of the work
item has been suspended, it is determined that processing of the work item is to be
resumed, and the work item is caused to be one of a predetermined number of next
work items presented to an operator after the determination is made.

47 Claims, 18 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 16

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☐ 48. Document ID: US 5960420 A

L3: Entry 48 of 58   File: USPT   Sep 28, 1999

US-PAT-NO: 5960420
DOCUMENT-IDENTIFIER: US 5960420 A

TITLE: Systems, methods and computer program products for implementing a workflow
engine in database management system

DATE-ISSUED: September 28, 1999

INVENTOR-INFORMATION:
NAME   CITY   STATE   ZIP CODE   COUNTRY
Leymann; Frank   Aidlingen   DE
Roller; Dieter   Schonaich   DE

US-CL-CURRENT: 707/1; 705/8, 707/10, 707/100, 707/104.1

ABSTRACT:

Workflow management systems (WFMS) execute a multitude of process models including a
network of potentially distributed activities. WFMS store WFMS state information on
the process models, the process model instances currently executed by the WFMS,
together with the instances's state and the state of the WFMS themselves, in
Database Management Systems (DBMS). The WFMS engines encompassing a set of control
functions are implemented directly within the DBMS. Only stubs corresponding to
these control functions need be implemented within the WFMS. The stubs exploit the
services of the control function cores within the DBMS. Such implementation
architectures can increase performance of WFMS significantly as the control
functions can operate on and within those computer systems which store the data on
the WFMS state.

24 Claims, 12 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 8

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw. Desc | Image |

☐ 49.   Document ID: US 5940804 A

L3: Entry 49 of 58   File: USPT   Aug 17, 1999

US-PAT-NO: 5940804
DOCUMENT-IDENTIFIER: US 5940804 A

TITLE: Computer executable workflow resource management system

DATE-ISSUED: August 17, 1999

INVENTOR-INFORMATION:
NAME   CITY   STATE   ZIP CODE   COUNTRY
Turley; William N.   Sandy   UT   84093
Hawks; Verlyn D.   Bountiful   UT   84010
Gibson; Kenneth U.   West Valley City   UT   84119

US-CL-CURRENT: 705/9; 707/102, 707/2

ABSTRACT:

A computer system executable method is provided for managing resources in an
automated workflow system for manipulating a work item, the work item being stored

in a database of work items for subsequent execution by an operator and meeting a
predetermined criteria. A first definitional data item is stored in a memory, the
first definitional data item affecting how the workflow system processes work items
meeting the predetermined criteria. A directive is received from an administrator to
remove the first definitional data item from the memory. A mark is set, the mark
being associated with the first definitional data item to indicate that the first
definitional data item is to be removed from the memory. If a second definitional
data item is normally able to be made dependent on the first definitional data item,
the mark is used to prevent the second definitional data item from being made
dependent on the first definitional data item after the mark was set. The mark is
used to prevent the first definitional data item from affecting another work item if
the other work item failed to meet the predetermined criteria until after the mark
was set. The work item is processed until the work item no longer meets the
predetermined criteria. It is determined whether any other definitional data items
are dependent on the first definitional data item. Depending on the outcome of the
determination, the first definitional data item is removed from the memory.

35 Claims, 10 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 6

☑ 50. Document ID: US 5937388 A
L3: Entry 50 of 58   File: USPT   Aug 10, 1999

US-PAT-NO: 5937388
DOCUMENT-IDENTIFIER: US 5937388 A

TITLE: System and method for performing scalable distribution of process flow
activities in a distributed workflow management system

DATE-ISSUED: August 10, 1999

INVENTOR-INFORMATION:
NAME	CITY	STATE	ZIP CODE	COUNTRY
Davis; James W.	Sunnyvale	CA		
Du; Weimin	San Jose	CA		
Shan; Ming-Chien	Saratoga	CA		
Sheard; Nicolas	Palo Alto	CA		

US-CL-CURRENT: 705/8; 705/1, 705/9, 714/15, 714/51

ABSTRACT:

A system and method for performing scalable distribution of process flow activities
in a distributed workflow management system is described. The distributed workflow
management system operates over the computer network which includes a plurality of
interconnected computers. Each computer includes a processor, memory and
input/output facilities. A plurality of resources are each operatively coupled to at
least one of the computers and execute at least one of the activities in the process
flow. A process flow engine, including a database in which is stored data used in
effecting each of the process flow activities, coordinates and schedules execution
of the process flow activities on the resources. Bidirectional proxy components are
operatively interposed between the process flow engine and the resources. The
bidirectional proxy components include logic for handling application data for the
resources, logic for handling worklists for access by the resources and logic for
managing transport of messages between the process flow engine and each of the
resources.

26 Claims, 16 Drawing figures

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Exemplary Claim Number: 1
Number of Drawing Sheets: 13
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| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

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